CITY COUNCIL CONFERENCE MINUTES

March 24, 2015

The City Council of the City of Norman, Cleveland County, State of Oklahoma, met in a conference at 5:30 p.m. in the Municipal Building Conference Room on the 24th day of March, 2015, and notice and agenda of the meeting were posted at the Municipal Building at 201 West Gray, and the Norman Public Library at 225 North Webster 48 hours prior to the beginning of the meeting.

PRESENT:	Councilmembers Allison, Castleberry, Heiple, Holman, Lang, Miller, Williams, and Mayor Rosenthal
ABSENT:	Councilmember Jungman

Item 1, being:

PRESENTATION FROM RCC CONSULTANTS, INC., OF PHASE 1 OF THE EMERGENCY COMMUNICTION SYSTEM ASSESSMENT, ALTERNATIVES ANALYSIS AND RECOMMENDATIONS.

Mr. Steve Lewis, City Manager, said it was approximately one (1) year ago the Public Safety Sales Tax (PSST) was extended and also converted from a temporary tax to a permanent tax by voter approval, and included specific capital improvements, one of which is the City's Emergency Communication System (ECS). He said the City hired RCC Consultants, Inc., (RCC) to conduct a Phase I assessment of the City's current ECS.

Mr. JD Younger, Major, Norman Police Department (NPD), said the ECS Project is divided into three (3) phases and tonight's presentation will highlight the analysis, recommendations, and scope of work for Phase 1 of the ESC project.

Mr. Greg Munchrath, Senior Vice President and Western Division Manager, RCC, said his company has 32 years' experience specializing in communication system consulting and engineering for both the private and public sector; however, public safety communication systems are primarily the scope of work performed. He said RCC is client focused and does not sell communication equipment or have any vendor affiliation; therefore, RCC can examine vendor proposals and offer a clear and honest opinion of what would be best for Norman.

Mr. Scott Johnson, RCC Project Manager, said the City needs to replace the existing land-mobile radio system because its aging mission critical 800 MHz trunked radio system is approaching the end of its life. He said old outdated vendor-proprietary technology is facing a rapid decline in vendor support and parts availability support will end in 2018. He said the current system supports 755 City radios for Police, Fire, Public Works, Utilities, Emergency Management, and Parks operations as well as 19 outside agencies who share the system to include Cleveland County Sheriff's Office, Oklahoma University Police, Norman Regional Health/EMSTAT, Fire Departments from Little Axe, Noble, Slaughterville, Cedar Country, Lexington, Purcell, and Goldsby; Emergency Managements from the cities of Moore and Purcell; Oklahoma State Emergency Management, Lighthorse Police and Absentee Shawnee Tribe; Oklahoma Highway Patrol and Lake Rangers; Police Departments from Lexington, Noble, and Purcell; and Wadley EMS.

Mr. Johnson said RCC recommends a phased project approach for the ESC project, which began with Phase 1, Needs Assessment and Alternatives Analysis; followed by Phase 2, Request for Proposal (RFP), Vendor Proposal Evaluations, and Contract Negotiations; and Phase 3, Implementation, Project Management, and Acceptance Testing.

Mr. Johnson said RCC is at the end of Phase 1 which includes review of the existing system, requirements definition through user interview and analysis, and development of conceptual solutions and budgetary costs.

Mr. Johnson said RCC divided Phase 1 into several tasks to include:

- Task 1: Project initiation and orientation meeting – held September 11, 2014;
- Task 2: Understand current system and history – held discussions with current radio management personnel, and visited radio sites and dispatch center;
- Task 3: Developed and distributed radio user questionnaires – questionnaires were specific to operations of each department;
- Task 4: Analyzed completed questionnaires;
- Task 5: Conducted departmental interviews with Norman Police Department (NPD); Norman Fire Department (NFD); Emergency Management; Public Works; Parks; and Utilities.
- Task 6: Integrated questionnaire, interview, and site visit material into Assessment Report;
- Task 7: Developed conceptual system replacement alternatives and budgetary cost estimates; and
- Tasks 8 – 11: Developed Phase 1 Report.

Mr. Johnson said Norman's current system has two (2) sites; each having an analog Motorola 800 MHz trunked radio system which was originally installed in 2000 and upgraded to OKWIN in 2008. He said the current system has served the City reasonably well, but has systemic problems. He said the City's growth and increasing need for improved on-street and in-building radio communications has placed greater operational demands on the aging system. Mr. Johnson said the current system is vendor proprietary and newer P25 digital systems use non-proprietary standards-based technology. He said the competitive multi-vendor procurement reduces costs while supporting needed radio interoperability with neighbors.

Mr. Johnson highlighted the current system components and City radio quantities. He said City Staff has reported system issues such as radio system coverage, interoperability, channel congestion, system interference, outdated equipment, and frequent equipment failure.

Mr. Johnson highlighted coverage basics and some of the important parameters to consider include head versus hip operation, coverage reliability, and Delivered Audio Quality (DAQ). Mr. Johnson said with head operation coverage the antenna is higher and the body signal loss is not as prevalent as hip operation. Typically more tower site coverage is needed for belt/hip operation versus head operation. He said Staff currently uses the belt/hip coverage; therefore, RCC configured belt/hip coverage as the parameters. Mr. Johnson said a radio case with a swivel allows a better coverage because it sets approximately two (2) inches away from the body versus the belt clip which allows shielding coverage from the elbow and armpit area. He said all of these parameters need to be determined in the beginning so that a radio communications system can be designed to perform and meet the City's expectations.

The typical public safety standard for coverage reliability is 95% and the typical public safety standard for voice quality criteria (coming out of the radio) is 3.4 for the Delivered Audio Quality (DAQ). The accurate amount of portable coverage requirement(s) needs to be defined clearly in the RFP for residential structures, heavier structures, and special areas because emergency personnel entering buildings rely on radio coverage; therefore, the vendor can address the City's specific needs and expectations.

Mr. Johnson gave examples and categories of portable coverage levels required are as follows:

- Outdoor/On-street coverage;
- Portable coverage 10 decibels (dB): coverage level needed when in residential homes, convenience stores, strip centers with large windows, restaurants;
- Portable coverage 20 dB: coverage level needed when in school(s) with some windows, strip centers with no windows, multi-story buildings with windows, and bank buildings; and
- Portable coverage 30 dB: coverage level needed when in multi-story buildings with small/few windows, internal mall department stores, large multi-story hospitals, and large concrete or heavily constructed buildings.

RCC provided a map of the City depicting the current portable radio coverage for outdoor/on-street. Mr. Munchrath said the map also revealed coverage areas that are below the 95% reliability coverage to areas that do not have any coverage at all. He said in order for the radios to work they must receive a minimum level of signal from the tower site and topography, terrain, and land-use can impact radio coverage.

Major Younger said one example of how radio coverage can be impacted happened three (3) years ago during the wildfires in the Little Axe area; whereas, Fire Department personnel had a difficult time communicating. Councilmember Miller asked whether schools located in the far east areas of Norman have coverage difficulties and Mr. Munchrath said yes, there may be coverage outside the school in the parking lot; however, within the school building the coverage may be less or not available. The signal outside the schools (or other areas that have below 95% reliability coverage) needs to be stronger so that it will penetrate the building. He said one way to accomplish this is to have a tower site nearby because signals are stronger when closer to a tower site. He said an option would be to increase the number of tower sites in the area(s) and "beef up" the in-building coverage so that coverage can be maintained to a 95% reliability level. Another option would be to install radio sprinkler systems in a building because they "sprinkle" radio signals within the building and are called distributed antenna systems. Mr. Johnson said Norman currently has three sprinkler systems installed in three (3) City buildings that assist with radio coverage.

Mr. Johnson said the major system issue is the outdated equipment and said the current infrastructure equipment will be at the end of life in 2018; therefore, vendor software support will not be available and the City will not be able to purchase new parts. He said the current user radio inventory will be at or beyond end of life when a new system goes online and there is a desire to minimize the number of different models/vendors of user equipment to streamline the system maintenance process.

Councilmember Heiple asked how much a new ECS will cost and Mr. Keith Humphrey, Police Chief, said the voters approved $15 million within the renewal of the Public Safety Sales Tax (PSST) for an ECS and Staff strongly feels it will be within that budget. Mr. Munchrath said he is hesitant to throw a number out because RCC wants the competitive process to work in the City's best interest.

Mr. Munchrath said RCC set up a conceptual system design meeting to analyze and discuss various radio system configurations. He said those in attendance included Major Younger, Lance Terry, NPD Communications, and Jesse Mitchell, NFD Captain. Mr. Munchrath said the attendees utilized RCC's ComSite wireless system design tools to analyze more than 20 different system configurations to zero in on a conceptual configuration. He said for planning and budgetary purposes, the process established the system design be an 8-site coverage, but noted this is not a final system design. He presented a map of what the coverage could be for Norman if a conceptual 8-site coverage parameter was constructed.

Mr. Johnson said RCC also utilized Norman's 2025 Land and Transportation Plan map to determine the 20 dB boundary for Norman and said this process helped to consider not only the coverage parameters, but potential tower site locations as well. When comparing the conceptual 8-site coverage map to the existing coverage map, Mr. Munchrath said a new system based on the conceptual 8-site coverage would have excellent coverage and would be a big improvement for Norman.

Mr. Munchrath said most believe that a public safety radio, coverage wise, should work (at the very least) as well as a cell phone and for that reason the coverage requirements have increased over the years for in-building coverage. Councilmember Castleberry asked if the public safety radios could use the same cellular coverage used for cell phones and Mr. Munchrath said no, because of different networks. Mr. Munchrath said the wireless carriers have a different user base and model. He said their goal is to put as many subscribers on their radio infrastructure as they can, at so many dollars per month. He said when big events happen such as tornados, fires, etc., the cellular networks get locked up because cell phone users flock to that mode of communication and the cellular infrastructure is overwhelmed with traffic.

Major Younger said the City's current radio system can handle everyday routine traffic, but it is not designed to handle an enormous amount of call traffic and said it is imperative that the public safety system works well, especially during big events. Major Younger said when resources/calls began pouring in during the 2014 Moore tornado the current public safety system and OKWIN locked up. Council asked Staff whether OKWIN users will piggyback onto Norman's new public safety system or will OKWIN users be on their own to make upgrades and Major Younger said Norman will still have a relationship with OKWIN and outside agencies but it will be in a different format. He said most of Norman's current issues are system control; stating that the Tulsa Master Site/Switch controls OKWIN, not the City of Norman. Major Younger said the City of Norman currently does not have the ability to manage any interoperability, but felt a proposal will include a component that will allow Norman a degree of control over the OKWIN system so that if and/or when a heavy loading/calling incident occurs the City of Norman will be able to manage our public safety radio system interoperability.

Councilmember Allison asked whether outside agencies will be charged a fee if they utilize Norman's new emergency communication system and Major Younger said no, because the arrangement would be a mutual exchange of systems. Major Younger said currently, OKWIN is a handshake agreement between seven (7) primary agencies to include Edmond, Shawnee, State of Oklahoma, Tulsa, etc., whereas each agency has a degree of interoperability of each other's emergency communication system.

Major Younger said in 2008 Norman's emergency communication system was at a point where the City needed $1.6 million to make necessary upgrades or it would not work. He said the City of Norman entered into a relationship with OKWIN at that time and paid for the necessary upgrade(s). Major Younger said that relationship was out of necessity, both financially and operationally and is how Norman came to be on Tulsa's Master Site/Switch known as OKWIN. He did not feel that was a bad move because the Norman's use of multiple partner agencies' systems was born through the OKWIN relationship.

Councilmember Allison asked whether the current users on OKWIN would move to Norman's emergency communication system and Major Younger said that is yet to be seen. Major Younger said one scenario could be existing infrastructure could be passed onto OKWIN to maintain for those users and another scenario might be the City of Norman enters into a new partnership with the new infrastructure built and have some kind of sharing agreement, whether it is cost sharing or resource base sharing. He said other agency towers exist and economic efficiency can be gained if agencies can utilize one another's towers. He said Phase 2 of the project will explore all of these scenarios to determine what is best for Norman.

Mayor Rosenthal stated the agency relationships are often reciprocal and any agreement(s) are not one-sided and Major Younger said that is correct. He said there are different levels of partnerships, for example, there are few entities that can financially be equal partners, partnering on land and/or tower use, as well as different contributions to a project and in return a partner could be granted use of a system. He clarified that partnerships may not be a one-for-one trade, but instead be an in-trade partnership, or maintenance partnership, etc.

Mr. Munchrath said new system requirements include:

- P25 solution-interoperability (standard base) and multi-vendor sourced radios;
- Improved radio coverage outdoors and in buildings throughout the City;
- Improved system redundancy and reliability;
- Capacity and expandability for the foreseeable future;
- Long-term useful life; and
- Public safety capabilities to include emergency alert, user ID, encryption, interoperability, system management reports, etc.

RCC recommends the following:

- Develop a radio system Request for Proposal (RFP) that meets user requirements;
- Utilize a competitive system procurement process:
  - ✓ Substantially better system pricing;
  - ✓ Better system configuration and design; and
  - ✓ More productive contract negotiations;
- Provide capacity for current operations and anticipated system growth with regards to radio frequencies (currently 14) and talkpaths (currently 13);
- Include system redundancy in key areas, no single points of failure:
  - ✓ Redundant Master Control Point (MCP);
  - ✓ Consider partnering with a neighbor for redundant MCP support;
  - ✓ Redundant geographically separated simulcast controllers;
  - ✓ Loop microwave connectivity to all sites and dispatch center; and
  - ✓ Develop back-up dispatch capability;
- Replace user radios consistent with user needs (high-tier, mid-tier, and low-tier);
- Identify repeater (tower) site options for utilization in RFP process;
- Develop portable radio battery replacement program and infrastructure maintenance program for new system;
- Conduct dispatch center study and develop a plan for a new dispatch center (currently underway); and
- Develop a robust radio user training program.

Mr. Munchrath said the next steps include:

Phase 2: Develop RFPs, propose solicitations and conduct vendor proposal evaluations, and have contract negotiations. Phase 2 will take approximately one (1) year and be completed mid to late 2016.

Phase 3: Implementation and project management, conduct rigorous system acceptance testing program to look at coverage, functionality, failure modes, and fallback modes. Once satisfied with the testing phase, user training will be scheduled followed by developing a system cutover. Phase 3 will take approximately one (1) year to 18 months and be completed late 2017 to early 2018. Mr. Johnson said the timeframe is largely dependent on site development, e.g., land availability, budget for land purchase, will neighbors be opposed to the project, etc.

Major Younger clarified the City's contract with RCC only covers Phase 1 of the Emergency Communications System (ECS) project. He said if Council approves RCC's recommendations for the ECS project; Staff will need Council guidance regarding keeping and obtaining RCC for Phase 2 or going a different route before Phase 2 can begin.

Mayor Rosenthal asked RCC for more information about the similar process the City of Oklahoma City (OKC) is currently doing and whether Staff or the vendors will determine possible partnerships with agencies. Major Younger said Staff attended a partnership meeting in OKC yesterday similar to the partnership meeting Norman conducted in December, 2014. He said OKC called in their local partners to include the Cities of Midwest City, Norman, Edmond, and described their project including their projected timeline. Major Younger said OKC's presentation included a vision map of what an emergency communication system could look like with potential partners and he said the map included Norman as a geographic area representative. He felt OKC is as open as Norman regarding efficiencies that can be gained from an operational standpoint to long-term sustainability, i.e., can we afford it now, can we afford it in the future, and how can we improve communications and implement a system that will be sustainable.

Mayor Rosenthal asked Staff about partial partnerships and Major Younger said one example is the potential that both cities could make use of one tower, i.e., a tower site location that both the City of Norman and OKC could share since Norman abuts OKC in both the northeast corner and the northwest corner. He said another notable potential would be to partner with OKC as another back-up site, i.e., Norman would have a back-up site and OKC would have a back-up site, each having the capability to back-up one another's communication systems.

Major Younger said Norman currently has a partnership with the University of Oklahoma (OU) where one of the City's towers is located on OU's building (Sarkeys Energy Center). He said OU has their own dispatch center, but the City and OU share that particular tower infrastructure. He said this is another example of where one agency provides a physical location (for a tower) while the other agency provides technical support. Major Younger said OU, as well as the Cleveland County Sheriff's Department, attended Norman's partnership held in December, 2014.

Councilmember Castleberry asked whether the P25 system will be operating statewide and Mr. Johnson said yes, P25 was implemented at the Texas border, moving up towards Oklahoma. He asked how the P25 system would work, particularly regarding back-ups, if a major disaster happened in Oklahoma. Major Younger said communication system networks can be technically bridged together and he cannot envision an RFP that does not involve concrete requirements regarding performance on interoperability with our partners.

Councilmember Allison asked whether anything can be done with the City's current system and Mr. Munchrath said absolutely, the current system is expected to stay in operation indefinitely for those agencies staying with OKWIN. Councilmember Allison asked if the City owned the tower equipment that would stay in operation for other agencies and Staff said yes; however, as long as the equipment is being operated for outside agencies the City of Norman could not "trade-in" this particular equipment for cash value. Mr. Munchrath said the City's trade-in could be a vehicle to allow the vendor to discount their package and said it is amazing some of the trade-ins he has seen in the industry, such as agencies received a trade-in larger than they paid for their old radio system that can be applied to a new purchase.

Mayor Rosenthal said having a competitive bidding process is very beneficial and should definitely be a part of the process. Mr. Munchrath agreed and said RCC recently helped the City of Houston, Texas, save approximately $30 million by utilizing a competitive bidding process.

Mayor Rosenthal asked Staff if further Council direction was needed and Mr. Steve Lewis, City Manager, felt Staff received enough direction to move forward; however, as previously mentioned, Staff will need to review the City's relationship with RCC in order to keep this project moving forward.

Items submitted for the record

1. Letter dated March 10, 2015, from Gregory A. Munchrath, Senior Vice President and Western Division Manager of RCC Consultants, Inc., to Major JD Younger, City of Norman Police Department, with attached Draft Phase I Radio System Replacement Report
2. PowerPoint presentation entitled, "City of Norman, Oklahoma, City of Norman Emergency Communication System Phase I Needs Assessment, Alternatives Analysis and Recommendations" from RCC Consultants, Inc., dated March, 2005

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The meeting adjourned at 6:24 p.m.

ATTEST:

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City Clerk Mayor